

Differential diagnosis and effective treatment of chemicals for respiratory infectious pneumonia and difficult bacterial coronavirus pneumonia

Development of Sars, Coronavirus Pneumonia, etc. (Fangruida)

***** Modern science and technology and biomedical engineering have developed rapidly. Medicine, genetic engineering, cells, enzymes, and proteins Microbiology is especially important. Respiratory infectious diseases such as pneumonia have also made significant progress in clinical research. Sars, bacterial viral pneumonia and other common difficult diseases have also expanded. Pneumonia, lung disease, lung cancer and other lung diseases bear the brunt. Bacterial and viral lung diseases are representative. In biology and medicine, there are many types of viruses, and coronavirus is an important virus. It spreads to many tissues and organs in humans and animals and livestock, which causes various serious diseases and seriously threatens human health. In particular, her specificity and difficulty, the harmfulness of infection is particularly significant, and the explosiveness of infectiousness is different. Especially in the winter and spring seasons, viral pneumonia, bacterial pneumonia, influenza and pneumonia are extremely easy to occur, spread in a large area, and have a very high mortality rate. Animals infected with these diseases also have a very high mortality rate, rapid onset, short incubation period, and strong spread of dissemination. It is the first disease and plague most likely to occur in humans. Moreover, today's medical technology and drugs are not effective and efficient in symptomatic treatment. Like Sars, cancer, AIDS and other major killers in the world, they have claimed the lives of millions of people. Research and treatment of difficult diseases, medical technology, clinical diagnosis, drug development, critical care, etc. require long-term research, pathological analysis, pathological analysis, viral chemical analysis, symptomatic drug development, chemical structure design and modification, zoology research, veterinary research Medical experimental research, veterinary and medical two-way research, clinical trials, virus model research, biochemical biophysics research experiments, microbiology, bioengineering, genetic engineering, cytology, enzymatic chemistry, proteinology, etc., huge investment, The research and development cycle is long, and the research is difficult. It needs the attention of all human beings and medical pharmacists. It cannot be achieved overnight.

There are many types of pneumonia, with emphasis on viral and bacterial. Sars and virus (coronavirus, etc.), the latter is mainly discussed here. Of course, there are various possibilities and pathways for virus generation and evolution, such as genetic variation, and new viruses may also germinate, but the relevant characteristics and stability of a virus also have certain conditions and mechanisms, which need to be rigorously empirical.

Coronavirus is a general term for a class of RNA viruses. They often infect mammals and birds, such as causing digestive diseases in cattle and pigs or upper respiratory diseases in chickens. Coronaviruses also cause respiratory infections in humans, which are generally mild but sometimes fatal. Coronaviruses cause 10 to 15% of common colds.

Taxonomically, coronavirus refers to the Coronavirus family of the order Reticuloviridae, which is divided into two subfamilies of the subfamily Coronavirus and the subfamily Cyclostrovirus. The coronavirus subfamily is divided into four genera: α , β , γ and δ . Coronaviruses have a genome size between 26 000 and 32 000 base pairs, making them the largest RNA virus in the genome.

Under the electron microscope, the corona virus has corona-like protrusions at the edges and

looks like a crown, so it is called a coronavirus. This pattern is formed by the rod-shaped envelope particles of the viral spinous processes (S), which are used to connect with host receptors and infect host cells. Coronaviruses are enveloped viruses whose genetic material is a positive-strand RNA genome and have a helix-symmetric coat protein.

Coronaviruses are common in nature, and different coronaviruses can infect a variety of mammals and birds. There are seven coronaviruses known to infect humans. Among them, the four coronaviruses of severe acute respiratory syndrome coronavirus, Middle East respiratory syndrome coronavirus HCoV-229E, HCoV-NL63, HCoV-HKU1, and HCoV-OC43 are common pathogens of human colds, and usually do not cause serious diseases. A small number of patients with poor immunity may experience complications such as pneumonia.

Viral inhibitory drugs that have been proven to be effective include: ① Ribavirin has broad-spectrum antiviral functions, including respiratory syncytial virus, adenovirus, parainfluenza virus, and influenza virus. ② Acyclovir is a chemically synthesized antiviral drug, which has the characteristics of broad spectrum, potency and fast onset. Clinically used for herpes virus, chickenpox virus infection. Especially for immunodeficiency or immunosuppressants should be applied as soon as possible. ③ Ganciclovir is an acyclic guanosine analog, which inhibits DNA synthesis. It is mainly used for cytomegalovirus infection. ④ Oseltamivir is a neuraminidase inhibitor, which has a good effect on influenza A and B viruses, and has a low incidence of drug resistance. ⑤ Adenosine is a purine nucleoside compound, which has a wide range of antiviral effects. It is mostly used to treat herpes virus and chickenpox virus infection in immunodeficiency patients. ⑥ Amantadine is a synthetic amine drug, which can prevent certain viruses from entering human cells and reducing fever. Clinically used for infections such as influenza virus.

Symptoms of viral pneumonia include fever, non-productive cough, and systemic signs such as myalgia and headache.

In order for the virus to replicate, it must invade cells. Typically, the virus reaches the lungs by inhalation through the mouth and nose by means of droplets. The virus invades the airway and cell mucosa of the alveoli. Such invasions often lead to cell death-either directly killed by the virus or destroyed by me through apoptosis.

When the immune system responds to an infection, it is accompanied by further damage to the lungs. White blood cells, especially the lymphocytes, activate a variety of chemical reactants, causing leaks to run into the alveoli. Cell destruction and fluid accumulation in the alveoli prevent the transmission of oxygen into the bloodstream.

Common causes of viral pneumonia are:
Influenza A and B

Human Respiratory Syncytial Virus (RSV-Respiratory syncytial virus)

(Child infection) Human parainfluenza viruses

The virus mainly causes other diseases, but sometimes also causes pneumonia:

Herpes simplex virus (HSV), mainly neonatal infections

Varicella-zoster virus (VZV)

Cytomegalovirus (CMV), patients with immune system problems

Adenoviruses in the Army

SARS (Severe Acute Respiratory Syndrome)

Viral pneumonia caused by influenza A or B should be treated with oseltamivir or zanamivir within 48 hours of the onset of symptoms. If it is caused by RSV (Respiratory syncytial virus), it should be treated with ribavirin. If it is caused by Herpes simplex virus (HSV) or varicella-zoster virus (VZV), aciclovir is usually used. In the case of Cytomegalovirus (CMV), ganciclovir is used.

Although wild animals also suffer from a variety of diseases, because of their small population and low density, they are not widely spread and the epidemic is not strong. They tend to stop on their own, and generally have limited harm. Once domesticated into domestic animals, the population expands and the density increases. First, the spread of infectious and parasitic diseases is rapid and the epidemic is fierce.

Humans first intervened in the epidemic of severe epidemics. As many severe infectious diseases are gradually eliminated or controlled, some veterinary workers have turned their attention to some serious parasitic diseases and made many broad-spectrum and highly effective anthelmintics. The etiology and pathology have been studied in depth, and its diagnosis and prevention methods have been improved to reduce losses.

After a single cause of a special infectious disease is gradually eliminated or controlled, some pathogenic microorganisms such as *Escherichia coli*, *Proteus*, *Pseudomonas aeruginosa*, *Brucella*, which are weakly pathogenic and widely distributed, were only used as conditional pathogens to maintain symbiosis with livestock. , *Clostridium perfringens*, mycoplasma, yeast, enterovirus, reovirus, adenovirus, herpes virus, and rotavirus, etc., appear at high speed when the body is weakened by internal or external adverse factors, showing high speed Fertility and a tendency to spread rapidly. Various multi-factor infectious diseases such as cough in dog farms, atrophic rhinitis in pigs, endemic pneumonia in cattle and pigs, and diseases in some young animals, such as part of piglets and lamb dysentery, all have feeding and management aspects. Defects are its contributing factors.

Comparative medicine is the intersection of medicine and veterinary medicine. It is based on the knowledge, technology and resources of veterinary science, through the comparative study of human and animal anatomy, physiology, pathology, disease phenomenon, immune mechanism, disease epidemic law and diagnosis and treatment methods, to provide medical valuable information in many aspects, Promote the development of basic medical and clinical disciplines. The role of veterinary science in biomedical aspects such as genetic defects, carcinogens and residual toxicology testing, experimental zoology, experimental surgery, organ transplantation, and artificial organs is increasingly showing its strong vitality. Especially in aerospace medicine, animal diseases and veterinary technology are irreplaceable research methods. In fact, sars, heart disease, liver disease, and cancer are often closely related to animals, plants, and microorganisms. Pneumonia, lung disease, and lung cancer are also closely related to animals, livestock, pigs, dogs,

sheep, cats, ducks, birds, and animals. It is a zoonotic disease. The same is true for pneumonia, viral pneumonia, and bacterial pneumonia. Of course, veterinary medicine and human medicine have something in common, and there are also big differences and differences, so they should not be completely confused.

Canine coronavirus disease (ccv) is a member of the Coronavirus family Coronavirus. The virus has the true general morphological characteristics of coronaviruses, which are round or oval, with a long diameter of 80 to 120 nm and a width of 75 to 80 nm. There is a capsule, and the surface of the capsule has petal-like fibroids, about 20 nm in length. It is easy to freeze and thaw. Shedding is de-infectious. The nucleocapsid is spiral. The virus genotype is single-stranded RNA. The floating density of the virus in CsCL is 1.15 to 1.16 g / cm³. The virus is sensitive to chloroform, ether, and deoxycholate. Also sensitive to heat. It can be inactivated by formaldehyde and ultraviolet rays.

1. Epidemic characteristics: Canine coronavirus disease occurs frequently in the cold winter and spreads rapidly, often outbreaks within a few days. Although there is no difference in breed, age, or sex, the disease usually occurs in puppies when it is prevalent in dogs, and then affects dogs of other ages. Puppies have higher morbidity and mortality than adult dogs.

2. The incubation period for PPR is 4-5 days, with a maximum of 21 days. Symptoms occur only in goats and sheep. Goats are severely affected, and sheep have occasional severe cases. Some recovered goats developed aphthous lesions on the lips. The clinical symptoms of infected animals are similar to those of cattle with rinderpest. Acute body temperature can rise to 41 ° C and last for 3 to 5 days. Infected animals are restless, with dull back hair, dry mouth and nose, and loss of appetite. A mucopurulent nasal leak, exhaling foul gas. In the first 4 days of the fever, the oral mucosa was congested, the buccal mucosa was extensively damaged, resulting in salivation, and then necrotic lesions appeared. Small, rough red superficial necrotic lesions began to appear in the oral mucosa, which later became pink and infected. The parts include the lower lip, lower gums, etc. In severe cases, necrotic lesions can be found in the tooth pads, palate, cheeks, nipples, tongue, etc. Bloody watery diarrhea occurred in the later stage, severe dehydration, wasting, and body temperature decreased. Cough and breathing problems. The morbidity rate is as high as 100%, in severe outbreaks, the mortality rate is 100%, and in mild cases, the mortality rate does not exceed 50%. Juvenile animals have a high incidence of severe morbidity and mortality. There is no effective treatment for this disease. The use of antibiotics and sulfa drugs at the beginning of the disease can symptomatically treat and prevent secondary infections.

1. Attenuated vaccine for rinderpest virus, because the virus is related to the antigen of rinderpest virus, the attenuated vaccine for rinderpest virus can be used to immunize sheep and goats for the prevention of small ruminant disease. The anti-rinderpest virus antibody produced by the vaccinia of rinderpest attenuated vaccine can resist the attack of zoonopestrum ruminant virus and has a good immune protection effect.

2. Pest ruminant virus, common attenuated vaccines are Nigeria7511 attenuated vaccine and Sungri / 96 attenuated vaccine. The vaccine does not have any side effects, and can cross-protect the attack infection of its various strains, but its thermal stability is poor.

3. Pest ruminant virus inactivated vaccine This vaccine is prepared from the pathological tissue of infected goats, and is generally inactivated with formaldehyde or chloroform. Practice has proven that the effect of formaldehyde-inactivated vaccines is not ideal, and the vaccines prepared with

chloroform inactivation have better results.

Clinically, it is mainly used for infectious gastroenteritis in pigs, influenza in livestock and poultry, viral pneumonia, atypical Newcastle disease, infectious bronchitis, and infectious laryngotracheitis.

Special effects on influenza A virus infection. Applicable to influenza A virus infection of quail, turkey, chicken and duck.

After treatment, the mortality rate was significantly reduced, but the infection rate could not be reduced. With anti-tremor anti-paralysis effect. Combined with antibiotics, it has the function of treating sepsis and viral hepatitis, and has antipyretic effect.

Guaranteed value of main ingredients and 100 grams of product ingredients

Amantadine hydrochloride (10 g), ribavirin (10 g), oral polymyocytes (20 g), ciprofloxacin hydrochloride (5 g), flurbiprofen, immune potentiator, anti-inflammatory and anti-inflammatory Allergic drugs, etc. This product is a white crystalline powder; it is odorless, tasteless and easily soluble in water.

Pharmacological action

This product can interfere with the virus's entry into the cell, prevent the virus from shelling and its nucleic acid release.

Dosage

1.Poultry

100g of this product is mixed with 500kg of water and 250kg of mix, and it can be used for 3-5 days to reduce the amount of prevention by half.

2.Livestock

100g of this product is mixed with 500kg of water and 250kg of mix, and it can be used for 3-5 days to reduce the amount of prevention by half.

Not usually. Dogs infected with this virus usually have mild onset symptoms and show a persistent cough, which may last for nearly three weeks, and may be accompanied by yellow nasal secretions. Antibiotics can effectively control the associated toxicity of carbon dioxide bacteria in dogs. The more serious dog flu symptoms are: high fever, faster breathing, and some other pneumonia-like symptoms. The use of antibiotics is effective in 65% of cases.

The first symptoms of a dog infected with the virus are cough, which can later develop into pneumonia, sometimes with fatal complications.

Comprehensive transmission of coronavirus shows that animals mainly

Infections through the inhalation tract, or through the mouth and conjunctiva. The virus is exhaled by

Or coughing gas, aerosols, tracheal secretions, and feces, but

Suspended in air or spread in pollution tools, pens, food, etc.

It is necessary, therefore, in the detection of anti-prototypes, immunization with peroxidase enzyme technology is often used.

Techniques, Immunization Electron Microscopy Techniques, Viral Nucleic Acid Detection Techniques

Coronaviruses mainly include human respiratory inhalers and coronaviruses

(HCV), human intestinal coronary virus (HECV), chicken infectious bronchitis virus (IBV), pig infectious gastroenteritis virus (TGEV), swine flu

Pediatric diarrhea virus (PEDV), porcine hemagglutinating cerebrospinal myelitis virus

(HEV), Mouse Hepatitis Virus (MHV), Flamingo Blue Crown Disease Virus (TCDV), Newborn Calf Diarrhea Coronavirus (NCDCV), Foal Stomach Enteritis Coronavirus (FGEV), Canine Coronavirus (CCV), Cat Transmission Sexual peritonitis virus (FIPV), rat coronavirus (RCV, respiratory tract And pneumonia), rat salivary glandular inflammation virus (SDAV) mink coronavirus disease virus (ECV), rabbit coronavirus disease virus

Other animals (including various aquatic spine animals And terrestrial vertebrate animals) have also successively discovered diseases caused by coronavirus viruses,

Mainly including Berne virus, Breda virus (Bredavirus) and human rheumatism.

Coronavirus 's essential properties

Coronavirus to chicken, pig, dog, cat, human and mouse coronavirus

Observation of negatively stained specimens showed that the coronavirus was polymorphic.

Coronavirus on alcohol, ether, chloroform, bile salts and other lipid solvents

Sensitive; very sensitive to temperature, so the epidemic caused by it is more frequent

In winter and early spring. Sensitivity to acid, various coronaviruses do not

They are all the same and generally sensitive to pH3 or below.

Proliferation on peritoneal cells and CRFK cells of primary kittens; TGEV and

HEV can adapt to primary pig kidney cells, spleen cells, thyroid cells, and testis

Pill cells, etc .; PEDV can adapt to fetal pig intestinal cells; NCDCV can adapt

Yingheng river monkey kidney cells, fetal bovine kidney cells; MHV can adapt to mice

Macrophages, mouse DBT cells, mouse 17CL-1 cells; HCV is suitable for succession to human embryonic kidney cells, WI-38 cells,

Macrophages, mouse DBT cells, mouse 17CL-1 cells; HCV is applicable to human embryonic kidney cells, WI-38 cells, HeLa cells and so on.

There are many types of coronaviruses in humans.

They belong to Class I and Class II respectively. Coronavirus has been found

New poisonous species such as mink coronavirus, rabbit coronavirus, etc.

Antiviral amantadine combined with Isathiazone

Materials can inhibit the proliferation of TGEV in cell culture; human coronavirus

The receptor suppressor of the 229E strain and TGEV is Ubenimex.

(The product name is Bestox or Ubenimex)) and

Oseltamivir

Drugs such as benzonatate also have reference value.

Canine coronavirus feline coronavirus swine pneumonia virus sheep pneumonia virus bovine pneumonia virus equine pneumonia virus oxytetracycline, telmicosin, flufenicol, or tylosin bovine viral pneumonia. Equine rhino pneumonia virus (EHV1) can be divided into two subtypes, namely subtype 1 is also called fetal subtype, which mainly causes abortion; subtype 2 is also called respiratory system type, which mainly causes respiratory symptoms. EHV1 can proliferate on chicken embryo fibroblasts and primary cells from horses, cattle, sheep, pigs, dogs, cats, hamsters, rabbits, and monkeys. In addition, EHV1 cannot be used in bovine, sheep, and rabbit

fetuses Intracellular proliferation

The full name of SV40 is Simian vacuolating virus 40 (Simian viruslatating virus 40) or Simian virus 40 (Simian virus 40), which is a polyoma virus and a DNA virus.

(Simian virus 40), a polyoma virus and a DNA virus

The Middle East Respiratory Syndrome Coronavirus is the pathogen that causes the Middle East Respiratory Syndrome (English abbreviation: MERS-CoV or codename: EMC / 2012 ' HCoV-EMC / 2012 ')

The lung is an important organ in the respiratory system of many animals breathing air. Mammals and other animals with more complex structures have two lungs, which are located in the chest cavity near the spine and on the left and right sides of the heart.

World Pneumonia Day was launched on November 2, 2009 by the Global Coalition against Child Pneumonia, a coalition of nearly a hundred organizations and institutions around the world. And it is determined that November 12 each year is World Pneumonia Day to urge the government to strengthen the prevention and treatment of pneumonia. The World Health Organization and UNICEF have released The Global Action Plan for the Prevention and Control of Pneumonia (GAPP) pneumonia, a disease that is not unfamiliar to most people The world's number one killer of children under the age of 5 kills about 2 million children under the age of 5 each year, and one child dies from pneumonia on average every 15 seconds. The number of middle-aged and elderly people who die from lung disease is also millions of counts each year.

University of Florida immunologist Sinda Crawford said that dog flu is relatively easy to spread in captive dog herds, but it may also spread in public places such as the street. Dogs sniff on the street and share the same Drinking trays can be infected. In addition to being able to spread from dog to dog, the virus may also be transmitted to people who have come in contact with sick dogs.

University of Florida immunologist Sinda Crawford said that dog flu is relatively easy to spread in captive dog herds, but it may also spread in public places such as the street. Dogs sniff on the street and share the same Drinking trays can be infected. In addition to being able to spread from dog to dog, the virus may also be transmitted to people who have come in contact with sick dogs.

Viral infections account for 90% of acute respiratory infections, while viral infections are mainly from the upper respiratory tract, including common cold, pharyngitis, laryngo-tracheobronchitis, bronchiolitis, infantile herpes angina, and epidemic chest pain. Pneumonia-causing viruses are rare, of which influenza viruses are common, others are parainfluenza viruses, cytomegaloviruses, adenoviruses, rhinoviruses, coronaviruses, and certain enteric viruses, such as Cocksackie and Echovirus And other viruses, such as herpes simplex, chicken pox-zoster, rubella, and measles. Infants and young children also often develop pneumonia from respiratory syncytial virus infection. Viral pneumonia mostly occurs in the winter and spring seasons, and can spread epidemic or outbreak. In nonbacterial pneumonia, viral infections account for 25% to 50%. Patients are mostly children, and adults are relatively rare.

In recent years, immunosuppressive drugs have been widely used in tumors, organ transplants, and the number of AIDS patients has increased year by year. Herpes simplex virus, chickenpox-zoster virus, cytomegalovirus, etc., can cause severe pneumonia. Viral pneumonia is an inhaled infection. It is transmitted through droplets from person to person. It is mainly caused by the downward spread of upper respiratory virus infection. It is often accompanied by tracheobronchitis. Domestic animals such as horses and pigs sometimes have a certain epidemic. Cold virus, occasional contact infection. Fecal oral infection is seen in enteroviruses, and respiratory syncytial virus is transmitted through dust. Organ transplant cases can be caused by multiple blood transfusions and even donor organs. Hematogenous viral pneumonia is not associated with tracheobronchiolitis.

The clinical manifestations of the disease are generally mild, similar to the symptoms of mycoplasma pneumonia. Onset is slow, with headache, fatigue, fever, cough, and a small amount of sticky sputum. Signs are often absent. X-ray examination of the lungs showed spotty, flaky, or even shadows. The total number of white blood cells can be normal, decreased or slightly increased. The course of disease usually ranges from 1 to 2 weeks. In patients with immune deficiency, viral pneumonia is often more severe, with persistent high fever, palpitations, shortness of breath, cyanosis, extreme failure, and can be accompanied by shock, heart failure, and azotemia. Due to the alveolar stroma and alveolar edema, respiratory distress syndrome can occur in severe cases. Physical examination may have wet rales. X-ray examination showed diffuse nodular infiltration, which was more common in two thirds of the lung field.

The clinical manifestations of patients with pneumonitis infected by the new coronavirus are: fever, fatigue, and dry cough. Nasal congestion and runny nose are rare. About one-half of the patients develop dyspnea after one week. In severe cases, they progress rapidly to acute respiratory distress syndrome, septic shock, difficult to correct metabolic acidosis, and coagulation dysfunction. It is worth noting that in the course of severe and critically ill patients, there can be moderate to low fever, even without obvious fever. Some patients have mild onset symptoms and no fever. They usually recover after 1 week. Most patients have a good prognosis, and a few patients are critically ill and even die.

The plan proposes that suspected and confirmed cases should be isolated and treated in designated hospitals with effective isolation and protective conditions. Suspected cases should be treated in isolation and in single rooms. Confirmed cases can be treated in the same ward. Critical cases should be admitted to ICU as soon as possible. The plan gives the principles and methods of general treatment, treatment of severe and critical cases, and 4 specific treatment plans for TCM syndrome differentiation.

pneumonia

fever

Chill

cough

Runny nose (either direct bacterial pneumonia, or accompanied by primary pneumonia virus)

Dyspnea-shortness of breath

Chest pain

Gram-positive pneumonia

Streptococcus pneumoniae (J13) is the most common bacteria caused by pneumonia in all age groups except newborn babies. *Streptococcus pneumoniae* is a Gram-positive bacterium that is also often found in the throat of people without pneumonia.

Other important Gram-positive bacteria pneumonia are *Staphylococcus aureus* (J15.2) and *Bacillus anthracis*.

Gram-negative pneumonia

Less Gram-negative bacteria: *Haemophilus influenzae* (J14), *Pneumoniae* (J15.0), *Escherichia coli* (J15.5), *Pseudomonas aeruginosa* (J15.1), *Pertussis* and *Moraxella* is the most common.

These bacteria are often present in the intestine and are inhaled into the lungs when intestinal contents (such as vomiting or feces).

Atypical bacteria causing pneumonia include *Burkholderia*, *Chlamydia pneumoniae* (J16.0), *Mycoplasma pneumoniae* (J15.7), and *Legionella pneumophila*.

Pneumonia caused by *Yersinia pestis* is often called pneumonic plague.

Bacteria usually enter the lungs by inhalation, but if other parts of the body are infected, they can reach the lungs through the blood. Normally, bacteria live in a part of the upper respiratory tract and are continuously inhaled into the alveoli, where gas exchange occurs in the lungs. Once in the alveoli, bacteria enter the space between cells and between adjacent alveoli by connecting pores. This invasion triggered the immune system's response by sending lung white blood cells responsible for attacking microorganisms (neutrophils). Neutrophils swallow and kill pests, but also release cytokines that lead to general activation of the immune system. This causes fever, chills, and fatigue common to bacterial and fungal pneumonia. Neutrophils, bacteria, and fluids leaking from surrounding blood vessels fill the alveoli and cause impaired oxygen transport.

Antibiotics are the first choice for bacterial pneumonia, and ventilation (oxygenation) is used as supportive therapy. The choice of antibiotics depends on the nature of pneumonia, the microorganisms that most often cause pneumonia in a geographic area, and the individual's immune status and potential health status. In the United Kingdom, the vast majority of patients with community-acquired pneumonia use amoxicillin as a first-line treatment, sometimes with clarithromycin. "Atypical" forms of community-acquired pneumonia are becoming more common in North America, and clarithromycin, azithromycin, or fluoroquinolones have replaced amoxicillin as first-line treatment as a monotherapy.

Streptococcus pneumoniae-amoxicillin (or erythromycin in patients with penicillin allergy); cefuroxime and erythromycin are used in critically ill patients. *Staphylococcus aureus*-flucloxacillin (antibiotic beta-lactamase).

Haemophilus influenzae doxycycline; second-generation mycotoxin, such as cefaclor

Pneumoniae

E.coli

Pseudomonas aeruginosa — Ciprofloxacin

Moraxella catarrhalis

Chlamydia pneumoniae-doxycycline

Chlamydia psittaci-erythromycin

Mycoplasma pneumoniae-erythromycin

Rickettsia Bernard-Doxycycline

Legionella pneumophila-erythromycin, sometimes with rifampicin.

People with difficulty breathing due to pneumonia may require additional oxygen. A severely ill person may need artificial ventilation and intensive care as a life-saving measure, and the patient's immune system with the help of antibiotics and other drugs to fight the cause of infection.

Bacterial pneumonia is prevented through vaccination against *Streptococcus pneumoniae* (pneumococcal polysaccharide vaccine for adults and pneumococcal conjugate vaccine for children), *Haemophilus influenzae* type B, *Meningococcus*, Pertussis Bode Enterobacteriaceae, *Bacillus anthracis* and *Yersinia pestis*.

Symptoms of infectious pneumonia include cough, fever and chills, difficulty breathing, chest pain when taking a deep breath, and a high breathing rate. The most obvious symptoms of older people are unconsciousness, mental changes or confusion. The typical symptoms of children under the age of five are fever, cough, and difficulty breathing.

Bacterial and viral pneumonia usually have similar symptoms, and some non-specific symptoms often occur in the pathogens that cause pneumonia, but patients with these symptoms cannot be diagnosed as the cause of the disease. For example, pneumonia caused by *Legionella* bacteria may be accompanied by abdominal pain, diarrhea, or confusion; pneumonia caused by *Streptococcus pneumoniae* may have rusty sputum, and pneumonia caused by *Klebsiella pneumoniae* may produce something like "black Gooseberry jelly ". But blood sputum is not a symptom specific to pneumonia. Pulmonary tuberculosis, Gram-negative bacteria pneumonia, lung abscess, and acute bronchitis all occur. Mycoplasmal pneumonia may be associated with cervical lymphadenopathy, joint pain, or otitis media. Viral pneumonia is more often accompanied by shortness of breath than bacterial pneumonia. In the past, it was believed that similar symptoms should be caused by similar causes, so they were classified as "typical" and "atypical". However, the evidence does not support this classification, so this classification is no longer taken seriously.

The causes of pneumonia are mainly bacteria or viruses, and occasionally caused by fungi and parasites. Pneumonia sometimes refers to all conditions related to lung inflammation. It is often used in combination with Pneumonitis. They are often translated as "pneumonia", but there are actually some differences between them. "Pneumonitis" refers to non-infectious lung inflammation. "Pneumonia" usually refers to infectious pneumonia. But as long as the patient has

When there are some risk factors that are likely to cause pneumonia, bacteria have a way to spread in organisms. Alcoholism is related to infections with *Streptococcus pneumoniae*, anaerobic organisms, and *Mycobacterium pneumoniae*. Smoking is likely to cause infections with *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis*, and *Legionella pneumophila*. Exposure to birds and *Chlamydia parrot* Related, farm animals are related to *Cox body baeksonii*. Aspiration of stomach contents into the lungs is likely to cause anaerobic biological infections. Cystic fibrosis is related to *Pseudomonas aeruginosa* and *Staphylococcus aureus*. *Streptococcus pneumoniae* is more likely to occur in winter, and the possibility of inhaling a large amount of anaerobic organisms into the lungs by mistake should also be considered.

Viral pneumonia accounts for one-third of pneumonia cases in adults and 15% in children. In general, viruses that are more likely to cause pneumonia include rhinovirus, coronavirus, orthomyxovirus, human respiratory syncytial virus (RSV), adenovirus, and paramyxovirus. Herpes simplex virus rarely causes pneumonia, except in certain groups such as newborns, cancer patients, organ transplant recipients, and patients with severe burns. If organ transplant patients or immunodeficiency patients have pneumonia, the high probability is that different types of viruses will each have a dominant time period at different times of the year, meaning that it may be a certain period of the year, a certain period of time, Virus species are more prosperous, accounting for a larger proportion of the overall infection, and in another period, they will be replaced by another virus species. For example, during the flu season, influenza virus infections can account for more than half of the total viral infections. And sometimes other types of virus infections, such as hantavirus or coronavirus, etc.

Pneumoinflammatory viruses may enter the lungs through different channels. Respiratory syncytial virus (RSV) is usually caused when a patient touches an infected object and then touches the eyes or nose. Other infections involve inhalation of droplets from the air. After the virus infects the upper respiratory tract, it may then infect the lungs and invade trachea-lined cells, alveoli, or parenchyma. In addition, measles and herpes viruses enter the lungs through the blood. Viral infections in the lungs can cause varying degrees of cell death, and once the immune system begins to fight these infections, mononuclear white blood cells will initiate an inflammatory response that may cause greater damage to the lungs. While damaging the lungs, the virus also affects other organs, further impeding normal body operations. The virus also makes the body more susceptible to other bacterial infections, so viral pneumonia may be co-infected with bacterial pneumonia.

Most bacteria can enter the lungs because they inhale microorganisms that reside in the throat or nasal cavity during breathing. About half of people inhale these bacteria while they are asleep. Humans are constantly flooded with these micro-organisms, while those that are infectious will only experience problems at certain times and occasions. After the bacteria reach the lungs, they will begin to invade the spaces between the cells and the alveoli, where macrophages and neutrophils (a type of epidemic-resistant leukocyte) will also try to resist the invasion of bacteria. The neutrophil also releases cytokines, which promotes the body to activate the immune system. This can cause fever, chills, and fatigue that are common in bacterial pneumonia. The neutrophils, bacteria, and intercellular fluids around the blood vessels will flood the alveoli, which is why the lungs will appear lumpy under X-rays.

Many diseases have symptoms and manifestations similar to pneumonia, including: chronic obstructive pulmonary disease, asthma, pulmonary edema, bronchiectasis, lung cancer, and pulmonary embolism. Asthma and chronic obstructive pulmonary disease are usually accompanied by wheezing. This symptom is rare in pneumonia, and patients with pulmonary edema often have abnormal electrocardiograms. Coughs caused by cancer and bronchiectasis

usually last longer. Pulmonary embolism is often accompanied by acute onset of chest pain and dyspnea.

"Pneumonia" is more terrible than "lung cancer". The increase in mortality ranks among the top ten causes of death. Pneumonia is a common acute lower respiratory tract infection. It refers to the infection of lung tissue by bacteria or viruses, or chemical or physical inflammation due to material irritation. Can be caused by a variety of pathogenic factors such as viruses, bacteria or fungi, among which *Streptococcus pneumoniae* is the most common. When patients with alveolar infections cause an inflammatory response, they often cause infiltration or pus in the lungs. In severe cases It can also cause breathing difficulties or death. Zh

There are two types of pneumonia, typical and atypical. The pathogen of typical pneumonia is bacteria. Atypical pneumonia is caused by all pathogens except bacteria. The most famous atypical pneumonia is the severe acute disease that caused global infection in 2003. Respiratory Syndrome (SARS).

Common symptoms of pneumonia

The American Lung Association points out that pneumonia symptoms are rarely noticed and severely require hospitalization, and the body's response to pneumonia varies depending on the type of bacteria infected, the age of the patient, and overall health. . Common symptoms of pneumonia include:

- Cough and may produce green, yellow or bloody sputum

- Fever, sweat, or chills

Dyspnea: shortness of breath, too fast and too shallow

- Chest discomfort: sharp or tingling pain in the chest, which can worsen during deep breathing or coughing

- Burnout: poor appetite and mental energy, feeling tired and weak

Nausea and vomiting

Confusion

Droplet infection: The sneezing droplets contain pathogenic bacteria. People who breathe in when they breathe in may cause infection, and the pathogenic bacteria will lurk in the nasopharynx of the human body. However, infection with pathogenic bacteria does not mean that the disease will occur immediately, but when the body's immunity is weak.

Contact infection: Suppose that the nasal cavity contains *streptococcus pneumoniae* and rubs the nose without washing hands and then contacts the person. When the bacteria enters the mouth, *streptococcus pneumoniae* may live in the throat. If the person carrying the pathogenic bacteria blows his nose, if the tissue is not properly handled, and the pathogenic bacteria on it are still alive, the next person may be infected by accidentally touching it.

The following are common types of pneumonia infections:

Community Infected Pneumonia: Infected in the living environment, the pathogen is usually

bacteria, and it is often found in people with poor immunity; aspiration pneumonia caused by foreign body inhalation and inhalation into the trachea is common in the elderly.

Nosocomial pneumonia: pneumonia complicated by hospitalization or surgery is often found in people with poor immunity, or intubation, which depends on artificial

The following are common types of pneumonia infections:

Community Infected Pneumonia: Infected in the living environment, the pathogen is usually bacteria, and it is often found in people with poor immunity; aspiration pneumonia caused by foreign body inhalation and inhalation into the trachea is common in the elderly.

Nosocomial pneumonia: Pneumonia complicated by hospitalization or surgery is often seen in patients with poor immunity, or intubated patients who rely on artificial respirators.

Pneumonia in immunocompromised patients: those with poor resistance such as organ transplant patients, chemotherapy patients, AIDS patients, etc.

Myramidopropyldimethylbenzyl ammonium chloride (myramistin, viral pneumonia treatment

[0010] Mainly symptomatic treatment, rest in bed, maintain air circulation in the room, pay attention to isolation and disinfection, and prevent cross infection. Give enough vitamins and protein, drink plenty of water and eat soft food a few times, intravenous infusion and oxygen as appropriate. Keep the airway unobstructed and clear the upper airway secretions in time. At the same time, with the use of virus-suppressing drugs, western medicine generally uses ribavirin, acyclovir, ganciclovir, oseltamivir, adenosine arabinoside, and amantadine. In principle, antibiotics should not be used to prevent secondary bacterial infections. If it is clear that bacterial infections have been combined, sensitive antibiotics should be selected in time.

Viral pneumonia is bronchial pneumonia caused by a variety of viral infections, which mostly occurs in winter and spring. Clinical manifestations are generally mild. The main symptoms are dry cough, fever, dyspnea, cyanosis and loss of appetite, fewer lung signs, normal or slightly increased white blood cell count. A chest X-ray examination has patchy inflammation shadows, and the general course is about 1-2 weeks

Viral pneumonia is bronchial pneumonia caused by a variety of viral infections. Common are influenza viruses, followed by parainfluenza viruses, cytomegaloviruses, adenoviruses, rhinoviruses, coronaviruses and certain enteric viruses, such as coxsackie, ecovirus, etc., and chickenpox, rubella, measles, Respiratory syncytial virus. Infection begins in the upper respiratory tract, with extensive destruction of the airway epithelium, ulcers on the mucosa, and fibrinous membranes. The defense function of the airway is reduced, and it is easy to cause bacterial infections and those with low immune status. It can still be combined with fungi and protozoa, especially *Pneumocystis carinii* infection. Simple viral pneumonia causes interstitial pneumonia with large monocyte infiltration in the alveolar septum. Alveolar edema, covered with a transparent film containing plasma proteins and fibrin, thickens the alveolar dispersion distance. Pneumonia can be focal or widely diffuse, or even consolidation. Viral inclusions can be seen in alveolar cells and macrophages. There are exudates in the bronchioles. Pulmonary fibrosis and even nodular calcification may remain after the lesion is absorbed. In addition, complications can occur.

Clinical manifestations The clinical manifestations of this disease are generally mild, similar to the symptoms of mycoplasma pneumonia. Onset is slow with headache, fatigue, fever, cough, and a

small amount of sticky sputum. Signs are often absent. X-ray examination of the lungs showed spotty, flaky, or even shadows. The total number of white blood cells can be normal, decreased or slightly increased. The course of disease is usually 1 to 2 weeks. In patients with immune deficiency, viral pneumonia is often more severe, with persistent high fever, palpitations, shortness of breath, cyanosis, extreme failure, and can be accompanied by shock, heart failure, and azotemia. Due to alveolar interstitial and alveolar edema, respiratory distress syndrome can occur in severe cases. Physical examination may have wet rales. X-ray examination showed diffuse nodular infiltration, which was more common in two thirds of the lung field. Diagnosis I. History and symptoms: Slow onset, upper respiratory symptoms such as dry throat, sore throat, sneezing, runny nose, fever, headache, anorexia, and general soreness. Cough may be involved in the lesions of the lung. (Severe dry cough), chest pain, shortness of breath, and other symptoms. When inquiring about the history, pay special attention to whether there is immune deficiency or immunosuppression. Second, the physical examination found: more signs are not obvious, and sometimes small blister sounds can be heard in the lower lungs. 3. Auxiliary examination: (1) X-ray chest radiograph, the two lungs are reticular shadows, and the lung texture is thickened and blurred. In severe cases, diffuse nodules can be seen in the middle and lower fields of the lungs. When secondary bacterial infection occurs, the white blood cell count and neutrophils Cells can increase. (3) Etiological examination: Virus culture is difficult and it is not easy to carry out routinely. The sputum smears of patients with pneumonia only found scattered bacteria and a large number of nucleated cells, or no pathogens could be found. The possibility of viral pneumonia should be suspected. (IV) Serological examination: It is of diagnostic significance to increase the antibody titer by 4 times or more in the double serum of the acute phase and the recovery phase, the complement binding test, the neutralization test or the serum inhibition test. In recent years, serum-specific IgM antibodies have been used to monitor the virus, which can help early diagnosis. Immunofluorescence, enzyme-linked immunosorbent assay, enzyme-labeled histochemical method, horseradish peroxidase-anti-horseradish peroxidase method, etc., can be used for rapid virus-specific rapid diagnosis.

1. Blood routine, urine routine, and fecal routine. 2. X-ray inspection. 3. Humoral immunoassay. 4, liver function tests, renal function tests. 5. Bacterial culture. 6. CT examination. 7. Endoscopy. 8. Functional test

Bacterial pneumonia, SARS, AP, influenza viral pneumonia, tuberculosis, pulmonary fungal pneumonia and other diseases are identified.

Secondary bacterial pneumonia: The most common pathogens are *Streptococcus pneumoniae*, *Staphylococcus aureus* or *Haemophilus influenzae*. The patient's condition gradually worsened, or after a temporary improvement, the clinical symptoms further worsened, coughing, purulent sputum, and signs of consolidation of the lungs. X-rays revealed flaky and patchy shadows on the lungs. Reye syndrome. Myocarditis: It has been reported that influenza virus pneumonia can be complicated by myocarditis.

First, the general treatment: to protect diarrhea, keep the airway open, prevent water, electrolytes and acid-base imbalance, if necessary, oxygen therapy. Antiviral drugs: Amantadine

0.1g, 2 times / d for 3 to 5 days; ribavirin, 10mg / kg, 2 or 3 times / d, orally or by injection; Banlangen, Astragalus, Honeysuckle, Daqingye, Forsythia, etc. have certain antiviral effects. Also available are alpha-interferon, thymosin, and the like. Third, the corresponding antibiotics should be given for secondary bacterial infections.

Alpha-interferon inhalation (5 million U each time for adults, add 2ml of sterile water for injection twice daily);

Lopinavir / ritonavir 2 capsules each time, twice a day.

Antiviral drugs are a class of drugs used to specifically treat viral infections. (Viricide) is different, the former is used to suppress the virus in the body, while the latter is used to destroy the virus in vitro.

The mechanism of antiviral drugs is to protect against further infections of the virus by affecting certain links that interfere with the viral replication cycle. For example, directly inhibit or kill the virus, interfere with the adsorption of the virus, prevent the virus from penetrating into the cell, inhibit the virus biosynthesis, inhibit the virus release, or enhance the host's anti-virus capabilities, etc.

Most antiviral drugs are currently used against HIV, herpes virus, hepatitis B and C viruses, and influenza A and B viruses. Antiviral drugs are divided into the following categories:

1. Penetration and Hulling Inhibitors: Amantadine, Amantadine, Enveviridi, Maravero
2. DNA polymerase inhibitors: acyclovir, ganciclovir, valacyclovir, famciclovir, sodium phosphonate
3. Reverse transcriptase inhibitor:
 1. Nucleosides: lamivudine, zidovudine, emtricitabine, tenofovir, adefovir dipivoxil
 2. Non-nucleosides: efavirenz, nevirapine
4. Protein inhibitor: saquinavir
5. Neuraminidase inhibitors: oseltamivir, zanamivir
6. Broad-spectrum antiviral drugs: ribavirin, interferon

These drugs have considerable curative effect or significant effect, which is worthy of recognition. New drug design and chemical structure modification, combined with biomedical engineering technology and genetic engineering, etc., new drugs will be developed gradually. Especially for the development of Sars, Coronavirus pneumonia and other drugs. Of course, botanicals or compound preparations will be developed gradually.

A. Traditional medicine

B. Chemical drugs Antiviral drugs, immunizing agents, antibacterial drugs, genetic drugs (combined drugs) for critically ill patients, etc.

C. Botanical drugs

D. Compound drugs

E. Immunizations, vaccines

F. Other physical therapy

G. Gene therapy

H. Medical sterilization detoxification chamber for respiratory infectious diseases Physical instrument therapy Respiratory therapy

I. surgery

J. Lung physical medical device

K. Some veterinary medicines (pneumonia drugs such as cattle, sheep, pigs, dogs, cats, etc., selective reduction and adaptation, strict selection without harm to the human body and toxic

and side effects) These drugs can also refer to, including clinical research, new drug development .The relevant therapeutic drugs and veterinary drugs for pneumonia should be carefully studied and compared to make comparisons and choices. The application of medical drugs on the human body must be scientifically appropriate, with no toxic and side effects, no carcinogenicity, no distortion, strict contraindications to ensure effectiveness.

L. Other.

M. Taking the above technologies and medical drugs will have a certain effect. For the firefighting of coronavirus, it will play a very important role in bacterial viral pneumonia (Sars, respiratory belt infectious diseases such as coronavirus pneumonia). At this stage, efficiency is obvious. Although it is a difficult disease, it is not an incurable disease, and the efficiency and cure rate will be the best. This is important for the suppression of large-scale spread of pneumonic disease and for medical treatment of patients with the disease.

Currently known influenza viruses are types A, B, and C, and the prevalence is mainly A and B. Amantadine and rimantadine only have inhibitory effects on influenza A virus and have similar efficacy. Early medication for mild influenza A can reduce fever and shorten the course of the disease. This type of drug is a convenient oral drug, but it is prone to drug resistance and can also cause adverse reactions such as dizziness and insomnia. Ribavirin is a broad-spectrum antiviral drug that inhibits a variety of DNA and RNA viruses in vivo and in vitro. It is suitable for respiratory fusion bronchitis, herpes zoster and pediatric adenoviral pneumonia, and is also used to treat epidemic bleeding. The drug of choice for fever. Chinese scholars have also achieved good results with their sprays and nasal drops for upper respiratory tract viral infections and intravenous injections for pediatric adenovirus infections. Its aerosol and aerosol administration is used abroad to treat influenza and respiratory syncytial virus pneumonia, and the effect is exact. Influenza virus neuraminidase can promote the release of newly formed influenza virus from infected cells and spread from the respiratory mucosa to surrounding tissues. Neuraminidase inhibitor zanamivir is a new type of antiviral drug that can effectively inhibit influenza A and B viruses. It has the same therapeutic effect on many neuraminidase-dependent viral epidemics and has options It has the advantages of high sex, low toxicity, strong activity, small dosage, wide range of action, and good prevention effect. Zanamivir has very low oral bioavailability and can only be administered orally or nasally. Osmimivir (Damifi), another potent inhibitor of neuraminidase, is a precursor of the active drug GS-4071, and has 3 to 6 times the inhibitory activity against neuraminidase of influenza virus than zanamivir. Delicious medicine. Primivir is a new type of anti-influenza neuraminidase inhibitor. Its activity is similar or stronger than that of zanamivir and osimivir. In vitro studies have shown that it has a very high selectivity for influenza virus. Good absorption, longer plasma half-life, can be used once a day.

Abidol tablets Lopinavir / Ritonavir tablets (Lopinavir / ritonavir, LPV / r, trade name: Cleeve

In the absence of the development of a new special drug, the use of the above-mentioned drugs and technical means is the best choice, and its effectiveness and high efficiency are worth affirming. It also takes time and process to be able to clinically treat drugs and vaccines. As long as we work hard, medical scientists and pharmacists must make breakthroughs and make significant progress in the time we can see.

Pneumonia diseases, including severe viral bacterial influenza pneumonia, are a major scourge of human survival, especially Sars viral pneumonia (coronary virus pneumonia, etc.) is extremely

harmful to humans, and must not be underestimated. A large-scale plague will occur, with the majority of deaths, with extremely dire consequences. To this end, strict precautions must be taken and the right medicine can be prescribed. Infectious diseases such as influenza, pneumonia, and hepatitis are high in the winter and spring seasons, and it is especially critical for vulnerable groups to resist. It is crucial to strengthen protection for specific and ordinary people to prevent the spread of large-scale infections. It is also critical to contain and prevent pathogens and sources of disease transmission. Coronavirus pneumonia is quite comparable to the pathogenesis and harm of various pneumonia in animals and livestock. Cattle, sheep, pigs, dogs, cats, birds, birds, etc. also have certain transmission of viral infections, and must not be taken lightly.

In summary, the research and treatment and prevention of Sars and Coronary New Viral Pneumonia are very important, especially for the treatment and prevention of infectious Coronary Viral Pneumonia, which is of great importance to people's life and health. major. 1. Source of infection Nature has a great relationship with animals, but other routes of transmission are not excluded. 2 Medical research and prevention In addition to the special genetic cells of the human body, animal test research is also very important, and it does not rule out zoonotic factors. Therefore, it is necessary to intensify research on the coronavirus pneumococcal virus related to animals and livestock, and closely integrate veterinary medicine with medicine, including experiments, and pathological drug treatment. 3. Under the existing technical conditions, how to treat medical treatment is the top priority. It is vital to save lives and prevent the spread of the disease. The harmful consequences of major plagues and infectious diseases are unimaginable. Inhibition drugs medical drugs immune drugs antiviral drugs are particularly important. 4. With the development of the times, the reproduction and evolution of life species, the biological world of nature is also changing. The evolution and mutation of germs and viruses will also occur, which deserves high attention and human vigilance. New types of germs and viruses will come to humans and should not be underestimated. 5. The rapid development of modern science and technology, biological engineering, genetic engineering, cells, enzymes, proteins, aerospace medicine, biomedical robotics engineering, drug design and development, vaccine development, screening and modification of pharmaceutical chemical structures, etc. are becoming increasingly important. Especially for major diseases that seriously threaten human life, AIDS, cancer, heart disease, lung disease, infectious diseases (Sars, Coronavirus pneumonia, etc.), difficult diseases and so on are of great significance. 6. Variations and biomarkers of coronavirus pneumonia, special effects and highly effective prevention and treatment techniques, and highly effective drugs and vaccines have all raised major research topics. The research and prevention of Sars and coronary pneumonia, the causes of repeated emergence of respiratory infectious diseases, and human preventive measures all require our high attention. Otherwise, humans will still be attacked by illness, and these viruses will recur and recur, or appear in new variants and metamorphosis.

(Network Diagram) Chemical Structure Diagram-Medicinal Chemical Structure Modification
Quoted from Related Websites

BetaCoV / Wuhan / IVDC-HB-01 / 2019, BetaCoV / Wuhan IVDC-HB-04 / 2020, BetaCoV / Wuhan / IVDC-HB-05 / 2019, BetaCoV / Wuhan / WIV04 / 2019 and BetaCoV / Wuhan / IPBCAMS-WH-01/2019 [6] [14] [15]. Its RNA sequence is approximately 30,000 nucleotides in length (source

Wikipedia)

Severe Acute Respiratory Syndrome (SARS) SARS Incident (2003) Middle East Respiratory Syndrome Coronavirus

(MERS) Middle East Respiratory Syndrome (2012) Variant A H1N1 Influenza (H1N1) 2009 H1N1 Influenza (2009) Ebola Virus Ebola Virus Outbreak in 2005 (2005)

References Citing data charts, etc .: Internet resources, Wikipedia, Chinese encyclopedia and related websites.Official website of the United Nations World Health Organization

West's Internal Medicine ([US] Lee Goldman, MD, Dennis Ausiello, MD (Author)

Mouse, Fly, Human and Genetics

Author: Francois Jacob

Veterinary Clinical Chemistry: A Case Study Approach

pubmed.com

French National Veterinary Institute <http://www.vet-alfort.fr/>

School of Veterinary Medicine, Utrecht University, Netherlands <http://www.vet.uu.nl/english>

Hannover Veterinary Institute, Germany <http://www.tiho-hannover.de/>

French National Veterinary Institute <http://www.vet-alfort.fr/>

School of Veterinary Medicine, Utrecht University, Netherlands <http://www.vet.uu.nl/english>

Hannover Veterinary Institute, Germany <http://www.tiho-hannover.de/>

**

Diagnostic différentiel et traitement efficace des produits chimiques pour la pneumonie infectieuse respiratoire et la pneumonie à coronavirus bactérien difficile

Développement de Sars, pneumonie à coronavirus, etc. (Fangruida)

***** La science et la technologie modernes et le génie biomédical se sont développés rapidement. Médecine, génie génétique, cellules, enzymes et protéines La microbiologie est particulièrement importante. Les maladies infectieuses respiratoires telles que la pneumonie ont également fait des progrès importants dans la recherche clinique. Les sars, la pneumonie virale bactérienne et d'autres maladies difficiles courantes se sont également développées. La pneumonie, les maladies pulmonaires, le cancer du poumon et d'autres maladies pulmonaires sont les plus touchées. Les maladies pulmonaires bactériennes et virales sont représentatives. En biologie et en médecine, il existe de nombreux types de virus et le

coronavirus est un virus important. Il se propage à de nombreux tissus et organes chez l'homme, les animaux et le bétail, ce qui provoque diverses maladies graves et menace gravement la santé humaine. En particulier, sa spécificité et sa difficulté, la nocivité de l'infection est particulièrement importante, et l'explosivité de l'infectiosité est différente. Surtout pendant les saisons d'hiver et de printemps, la pneumonie virale, la pneumonie bactérienne, la grippe et la pneumonie sont extrêmement faciles à produire, se propagent dans une grande zone et ont un taux de mortalité très élevé. Les animaux infectés par ces maladies ont également un taux de mortalité très élevé, une apparition rapide, une courte période d'incubation et une forte diffusion. Il s'agit de la première maladie et peste les plus susceptibles de survenir chez l'homme. De plus, la technologie médicale et les médicaments actuels ne sont pas efficaces et efficaces dans le traitement symptomatique. Comme Sars, le cancer, le SIDA et d'autres tueurs majeurs dans le monde, ils ont coûté la vie à des millions de personnes. La recherche et le traitement de maladies difficiles, la technologie médicale, le diagnostic clinique, le développement de médicaments, les soins intensifs, etc. nécessitent des recherches à long terme, une analyse pathologique, une analyse pathologique, une analyse chimique virale, un développement symptomatique de médicaments, une conception et une modification de la structure chimique, une recherche en zoologie, recherche vétérinaire Recherche expérimentale médicale, recherche bilatérale vétérinaire et médicale, essais cliniques, recherche de modèles de virus, expériences de recherche en biophysique biochimique, microbiologie, bio-ingénierie, génie génétique, cytologie, chimie enzymatique, protéinologie, etc., investissement énorme, recherche et développement le cycle est long et la recherche est difficile. Il a besoin de l'attention de tous les êtres humains et des pharmaciens médicaux. Cela ne peut pas être réalisé du jour au lendemain.

Il existe de nombreux types de pneumonie, l'accent étant mis sur les virus et les bactéries. Sars et virus (coronavirus, etc.), ce dernier est principalement discuté ici. Bien sûr, il existe diverses possibilités et voies de génération et d'évolution du virus, telles que la variation génétique, et de nouveaux virus peuvent également germer, mais les caractéristiques et la stabilité pertinentes d'un virus ont également certaines conditions et mécanismes, qui doivent être rigoureusement empiriques.

Le coronavirus est un terme général pour une classe de virus à ARN. Ils infectent souvent les mammifères et les oiseaux, par exemple en provoquant des maladies digestives chez les bovins et les porcs ou des maladies des voies respiratoires supérieures chez les poulets. Les coronavirus provoquent également des infections respiratoires chez l'homme, qui sont généralement légères mais parfois mortelles. Les coronavirus provoquent 10 à 15% des rhumes courants.

Du point de vue taxonomique, le coronavirus fait référence à la famille des coronavirus de l'ordre des rétrovirus, qui est divisée en deux sous-familles de la sous-famille Coronavirus et de la sous-famille Cyclostovirus. La sous-famille des coronavirus est divisée en quatre genres: α , β , γ et δ . Les coronavirus ont une taille de génome comprise entre 26 000 et 32 000 paires de bases, ce qui en fait le plus grand virus à ARN du génome.

Au microscope électronique, le virus corona a des protubérances corona comme sur les bords et ressemble à une couronne, donc on l'appelle un coronavirus. Ce motif est formé par les particules d'enveloppe en forme de bâtonnet des processus épineux viraux (S), qui sont utilisées pour se connecter aux récepteurs de l'hôte et infecter les cellules hôtes. Les coronavirus sont des virus enveloppés dont le matériel génétique est un génome à ARN à brin positif et qui ont une protéine d'enveloppe à symétrie hélicoïdale.

Les coronavirus sont de nature courante, et différents coronavirus peuvent infecter une variété de mammifères et d'oiseaux. Il existe sept coronavirus connus pour infecter les humains. Parmi eux, les quatre coronavirus du syndrome respiratoire aigu sévère, du coronavirus du syndrome respiratoire du Moyen-Orient HCoV-229E, HCoV-NL63, HCoV-HKU1 et HCoV-OC43 sont des pathogènes courants du rhume humain et ne provoquent généralement pas de maladies graves. Un petit nombre de patients ayant une faible immunité peuvent présenter des complications telles que la pneumonie.

La transmission complète du coronavirus montre que les animaux

Infections par voie respiratoire ou par la bouche et la conjonctive. Le virus est exhalé par

Ou de la toux, des aérosols, des sécrétions trachéales et des excréments, mais

Suspendu dans l'air ou répandu dans des outils de pollution, des enclos, de la nourriture, etc.

Il est nécessaire, par conséquent, dans la détection des anti-prototypes, l'immunisation avec la technologie des enzymes peroxydases est souvent utilisée.

Techniques, Techniques de microscopie électronique d'immunisation, Techniques de détection d'acide nucléique viral

Les coronavirus comprennent principalement les inhalateurs respiratoires humains et les coronavirus

(VHC), virus coronarien intestinal humain (HECV), virus de la bronchite infectieuse du poulet (IBV), virus de la gastro-entérite infectieuse du porc (TGEV), grippe porcine

Virus de la diarrhée pédiatrique (VDEP), virus de la myélite cérébrospinale hémagglutinante porcine

(HEV), Virus de l'hépatite de la souris (MHV), Flaming Chicken Blue Crown Disease Virus

(TCDV), Coronavirus de la diarrhée du veau nouveau-né (NCDCV), Estomac poulain

Virus de l'entérite coronaire (FGEV), Virus coronaire canin (CCV), Transmission du chat

Virus de la péritonite sexuelle (FIPV), virus coronaire du rat (RCV, voies respiratoires

Et pneumonie), virus de l'inflammation des glandes salivaires du rat (SDAV) virus de la maladie coronarienne du vison (ECV), virus de la maladie coronarienne du lapin

Autres animaux (y compris divers animaux de la colonne vertébrale aquatique

Et les animaux vertébrés terrestres) ont également découvert successivement des maladies causées par des virus coronaïres,

Comprenant principalement le virus de Berne, le virus Breda

(Bredavirus) et les rhumatismes humains.

Propriétés essentielles de la maladie coronarienne

Coronavirus pour coronavirus de poulet, porc, chien, chat, humain et souris

L'observation d'échantillons colorés négativement a montré que le coronavirus était polymorphe.

Virus coronaire sur l'alcool, l'éther, le chloroforme, les sels biliaires et autres solvants lipidiques

Sensible; très sensible à la température, donc l'épidémie provoquée par celle-ci est plus fréquente

En hiver et au début du printemps. Sensibilité à l'acide, divers coronavirus ne

Ils sont tous identiques et généralement sensibles à pH3 ou inférieur.

Prolifération sur cellules péritonéales et cellules CRFK de chatons primaires; TGEV et

Le VHE peut s'adapter aux cellules rénales primaires de porc, aux cellules de la rate, aux cellules thyroïdiennes et aux testicules

Cellules pilules, etc.; le PEDV peut s'adapter aux cellules intestinales du porc fœtal; le NCDCV peut s'adapter

Cellules rénales de singe de la rivière Yingheng, cellules rénales bovines fœtales; le MHV peut s'adapter aux souris

Macrophages, cellules DBT de souris, cellules 17CL-1 de souris; le VHC convient à la succession de cellules rénales embryonnaires humaines, de cellules wl-38,

Macrophages, cellules DBT de souris, cellules 17CL-1 de souris; le VHC est applicable aux cellules rénales embryonnaires humaines, aux cellules w-38, aux cellules Hela et ainsi de suite.

Il existe de nombreux types de coronavirus chez l'homme.

Ils appartiennent respectivement aux classes 1 et II. Une maladie coronarienne a été trouvée

Nouvelles espèces vénéneuses telles que le coronavirus de vison, le coronavirus de lapin, etc.

Amantadine antivirale associée à l'isathiazone

Les matériaux peuvent inhiber la prolifération du TGEV dans la culture cellulaire; maladie coronarienne humaine

Ubenimex (inhibiteur commercial de la souche 229E et du TGEV)

(Le nom du produit est Bestox ou Ubenimex)) et

Oseltamivir

Les médicaments tels que le benzonatate ont également une valeur de référence.

Coronavirus canin coronavirus félin virus de la pneumonie porcine virus de la pneumonie ovine virus de la pneumonie bovine virus de la pneumonie équine oxytétracycline, telmicoxine, flufénicol ou tylosine pneumonie virale bovine. Le virus de la pneumonie rhinocéros équine (EHV1) peut être divisé en deux sous-types, à savoir le sous-type 1 est également appelé sous-type fœtal, ce qui provoque principalement l'avortement; le sous-type 2 est également appelé type du système respiratoire, ce qui provoque principalement des symptômes respiratoires. L'EHV1 peut proliférer sur les fibroblastes d'embryons de poulet et les cellules primaires de chevaux, de bovins, de moutons, de porcs, de chiens, de chats, de hamsters, de lapins et de singes. Prolifération intracellulaire

Le nom complet de SV40 est Simian vacuolating virus 40 (Simian viruslating virus 40) ou Simian virus 40 (Simian virus 40), qui est un virus polyome et un virus à ADN.

(Virus Simian 40), un virus du polyome et un virus à ADN

Le syndrome respiratoire du Moyen-Orient Le coronavirus est l'agent pathogène qui cause le syndrome respiratoire du Moyen-Orient (abréviation anglaise: MERS-CoV ou nom de code: EMC / 2012' HCoV-EMC / 2012 »

Le poumon est un organe important dans le système respiratoire de nombreux animaux qui respirent de l'air. Les mammifères et les autres animaux aux structures plus complexes ont deux poumons, qui sont situés dans la cavité thoracique près de la colonne vertébrale et sur les côtés gauche et droit du cœur.

La Journée mondiale de la pneumonie a été lancée le 2 novembre 2009 par la Coalition mondiale contre la pneumonie infantile, une coalition de près d'une centaine d'organisations et

d'institutions à travers le monde. Et il est déterminé que le 12 novembre de chaque année est la Journée mondiale de la pneumonie pour exhorter le gouvernement à renforcer la prévention et le traitement de la pneumonie. L'Organisation mondiale de la santé et l'UNICEF ont publié le Plan d'action mondial pour la prévention et le contrôle de la pneumonie (GAPP), une maladie qui n'est pas inconnue de la plupart des gens. Le tueur numéro un mondial d'enfants de moins de 5 ans tue environ 2 millions d'enfants de moins de 5 ans chaque année, et un enfant meurt d'une pneumonie en moyenne toutes les 15 secondes. Le nombre de personnes d'âge moyen et de personnes âgées qui meurent d'une maladie pulmonaire représente également des millions de comptes chaque année.

.....

Site officiel de l'Organisation mondiale de la santé des Nations Unies

West's Internal Medicine ([États-Unis] Lee Goldman, MD, Dennis Ausiello, MD (Auteur)

Souris, mouche, humain et génétique

Auteur: François Jacob

Analyse de chimie clinique vétérinaire: une approche d'étude de cas

pubmed.com

Institut national vétérinaire français <http://www.vet-alfort.fr/>

École de médecine vétérinaire, Université d'Utrecht, Pays-Bas <http://www.vet.uu.nl/english>

Institut vétérinaire de Hanovre, Allemagne <http://www.tiho-hannover.de/>

Institut national vétérinaire français <http://www.vet-alfort.fr/>

École de médecine vétérinaire, Université d'Utrecht, Pays-Bas <http://www.vet.uu.nl/english>

Institut vétérinaire de Hanovre, Allemagne <http://www.tiho-hannover.de/>

Les médicaments inhibiteurs viraux dont l'efficacité a été prouvée comprennent: ① La ribavirine a des fonctions antivirales à large spectre, notamment le virus respiratoire syncytial, l'adénovirus, le virus parainfluenza et le virus grippal. ② L'acyclovir est un anti synthétisé chimiquement

En résumé, la recherche et le traitement et la prévention de la Sars et de la nouvelle pneumonie virale coronaire sont très importants, en particulier pour le traitement et la prévention de la pneumonie virale coronaire infectieuse, qui est d'une grande importance pour la vie et la santé des gens. Significative. 1. Source d'infection La nature a une grande relation avec les animaux, mais d'autres voies de transmission ne sont pas exclues. 2 Recherche médicale et prévention En plus des cellules génétiques spéciales du corps humain, la recherche sur les tests sur les animaux est également très importante et n'exclut pas les facteurs zoonotiques. Par conséquent, il est nécessaire d'intensifier la recherche sur le virus pneumococcique du coronavirus lié aux animaux et au bétail, et d'intégrer étroitement la médecine vétérinaire à la médecine, y compris les expériences, et le traitement médicamenteux pathologique. 3. Dans les conditions techniques existantes, la façon de traiter les traitements médicaux est la priorité absolue. Il est vital de sauver des vies et de prévenir la propagation de la maladie. Les conséquences néfastes des fléaux majeurs et des maladies infectieuses sont inimaginables. Médicaments d'inhibition Médicaments Médicaments Immunisés Les médicaments antiviraux sont particulièrement importants. 4. Avec le développement des temps, la reproduction et l'évolution des espèces vivantes, le monde

biologique de la nature change également. L'évolution et la mutation des germes et des virus se produiront également, ce qui mérite une grande attention et une vigilance humaine. De nouveaux types de germes et de virus vont frapper les humains et ne doivent pas être sous-estimés. 5. Le développement rapide de la science et de la technologie modernes, du génie biologique, du génie génétique, des cellules, des enzymes, des protéines, de la médecine aérospatiale, de la robotique biomédicale, de la conception et du développement de médicaments, de la mise au point de vaccins, du dépistage et de la modification des structures chimiques pharmaceutiques, etc. prennent de plus en plus d'importance. Surtout pour les principales maladies qui menacent gravement la vie humaine, le sida, le cancer, les maladies cardiaques, les maladies pulmonaires, les maladies infectieuses (Sars, pneumonie à coronavirus, etc.), les maladies difficiles, etc., sont d'une grande importance. 6. Les variations et les biomarqueurs de la pneumonie à coronavirus, les effets spéciaux et les technologies de prévention et de traitement hautement efficaces, ainsi que les médicaments et vaccins hautement efficaces, ont tous soulevé des thèmes de recherche majeurs. La recherche et la prévention du Sars et de la pneumonie coronarienne, les causes de l'émergence répétée de maladies infectieuses respiratoires et les mesures de prévention humaine nécessitent toutes notre grande attention. Sinon, les humains seront toujours attaqués par la maladie, et ces virus réapparaîtront et réapparaîtront, ou apparaîtront dans de nouvelles variantes et métamorphoses.

呼吸道感染性肺炎和難治性冠狀病毒性肺炎的化學藥品的鑑別診斷和有效治療
Sars, 冠狀病毒性肺炎等的發展 (方瑞達)

*****現代科學技術和生物醫學工程發展迅速。醫學，基因工程，細胞，酶和蛋白質微生物學尤為重要。諸如肺炎等呼吸道傳染病在臨床研究中也取得了重大進展。非典，細菌性病毒性肺炎和其他常見的困難疾病也有所增加。肺炎，肺部疾病，肺癌和其他肺部疾病首當其衝。細菌性和病毒性肺部疾病是代表性的。在生物學和醫學上，病毒類型很多，冠狀病毒是一種重要的病毒。它擴散到人，動物和牲畜的許多組織和器官，引起各種嚴重的疾病，嚴重威脅著人類的健康。特別是她的專一性和困難性，感染的危害性特別顯著，傳染性的爆炸性也不同。特別是在冬季和春季，病毒性肺炎，細菌性肺炎，流感和肺炎極易發生，在大範圍傳播，並且死亡率很高。被這些疾病感染的動物還具有很高的死亡率，起效快，潛伏期短和傳播力強。它是人類最有可能發生的第一種疾病和瘟疫。而且，當今的醫療技術和藥物在對症治療中並不有效。像非典，癌症，艾滋病和世界上其他主要殺手一樣，他們奪走了數百萬人的生命。疑難疾病的研究和治療，醫療技術，臨床診斷，藥物開發，重症監護等需要長期研究，病理分析，病毒化學分析，對症藥物開發，化學結構設計和修飾，動物學研究，獸醫研究醫學實驗研究，獸醫和醫學雙向研究，臨床試驗，病毒模型研究，生化生物物理學研究實驗，微生物學，生物工程，基因工程，細胞學，酶化學，蛋白質學等，巨額投資，研發週期長，研究困難。它需要所有人類和醫學藥劑師的關注。這不可能一 overnight 而就。

肺炎的類型很多，重點是病毒和細菌。 Sars 和病毒（冠狀病毒等），這裡主要討論後者。當然，病毒的產生和進化存在多種可能性和途徑，例如遺傳變異，並且新病毒也可能發芽，但是病毒的相關特徵和穩定性也具有某些條件和機制，這需要嚴格的經驗。

冠狀病毒是一類 RNA 病毒的總稱。它們經常感染哺乳動物和鳥類，例如導致牛和豬的消化系統疾病或雞的上呼吸道疾病。冠狀病毒還會引起人類呼吸道感染，通常是輕微的，但有時是致命的。冠狀病毒可引起普通感冒的 10% 至 15%。

從分類學上講，冠狀病毒是指網狀病毒科的冠狀病毒家族，它被分為冠狀病毒亞家族和輪狀病毒亞家族的兩個亞家族。冠狀病毒亞科分為四個屬： α ， β ， γ 和 δ 。冠狀病毒的基因組大小在 26000 至 32000 個鹼基對之間，使其成為基因組中最大的 RNA 病毒。

在電子顯微鏡下，日冕病毒的邊緣具有日冕狀突起，看起來像冠狀，因此被稱為日冕病毒。這種模式是由病毒棘突（S）的棒狀包膜顆粒形成的，這些顆粒用於與宿主受體連接並感染宿主細胞。冠狀病毒是包膜病毒，其遺傳物質為正鏈 RNA 基因組，並具有螺旋對稱的外殼蛋白。

冠狀病毒是自然界中常見的病毒，不同的冠狀病毒可以感染多種哺乳動物和鳥類。已知有七種冠狀病毒可感染人類。其中，重症急性呼吸綜合徵冠狀病毒，中東呼吸綜合徵冠狀病毒 HCoV-229E，HCoV-NL63，HCoV-HKU1 和 HCoV-OC43 的四種冠狀病毒是人感冒的常見病原體，通常不會引起嚴重的疾病。少數免疫力較差的患者可能會出現肺炎等並發症。

已證明有效的病毒抑制藥物包括：①利巴韋林具有廣譜抗病毒功能，包括呼吸道合胞病毒，腺病毒，副流感病毒和流感病毒。②阿昔洛韋是化學合成的抗

抗病毒藥物是一類專門用於治療病毒感染的藥物。（殺病毒劑）不同，前者用於抑制體內的病毒，而後者則用於在體外破壞病毒。

抗病毒藥物的機制是通過影響某些干擾病毒複製週期的環節來防止病毒進一步感染。例如，直接抑制或殺死病毒，干擾病毒的吸附，防止病毒滲透到細胞中，抑制病毒的生物合成，抑制病毒的釋放或增強宿主的抗病毒能力等。

目前，大多數抗病毒藥物都用於抵抗 HIV，皰疹病毒，乙型和丙型肝炎病毒以及甲型和乙型流感病毒。

抗病毒藥分為以下幾類：

- 1.滲透和脫殼抑制劑：金剛烷胺，金剛烷胺，Enveirdi，Maravero
2. DNA 聚合酶抑制劑：阿昔洛韋，更昔洛韋，伐昔洛韋，泛昔洛韋，膦酸鈉
- 3.逆轉錄酶抑制劑：
 - 1.核苷：拉米夫定，齊多夫定，恩曲他濱，替諾福韋，阿德福韋酯
 - 2.非核苷：依非韋倫，奈韋拉平
- 4.蛋白質抑制劑：沙奎那韋
- 5，神經氨酸酶抑制劑：奧司他韋，扎那米韋
- 6.廣譜抗病毒藥：利巴韋林，干擾素

這些藥物具有顯著的療效或顯著的療效，值得認可。新藥設計和化學結構修飾，結合生物醫學工程技術和基因工程等，將逐步開發新藥。特別是用於開發 Sars，冠狀病毒性肺炎等藥物。當然，植物藥或複方製劑將逐步開發。有關治療藥物和獸醫治療肺炎藥物要仔細研究，對比研究，從而做出比對和選擇。應用人體的醫學藥物，聯合用藥也要科學適量，無毒副作用無，致癌，無畸變，嚴格配伍禁忌，確保有效。

A.傳統醫學

B.化學藥品重症患者的抗病毒藥，免疫藥，抗菌藥，遺傳藥（聯合藥）等。

C.植物藥

- D.複合藥物
- E.免疫，疫苗
- F.其他理療
- G.基因治療
- H.用於呼吸道傳染病的醫療消毒解毒室物理儀器治療呼吸治療

J.肺物理醫療器械

K.某些獸藥（肺炎藥，例如牛，羊，豬，狗，貓等，選擇性減少和適應，嚴格選擇對人體無傷害和有毒副作用），這些藥物也可以指代，包括臨床研究，新藥開發。有關治療藥物和獸醫治療肺炎藥物要仔細研究，對比研究，從而做出比對和選擇。應用人體的醫學藥物，聯合用藥也要科學適量，無毒副作用無，致癌，無畸變，嚴格配伍禁忌，確保有效。

L.其他。

M. 服用上述技術和藥物會產生一定的效果。對於冠狀病毒的消防，它將在細菌性病毒性肺炎（Sars，呼吸帶傳染病，例如冠狀病毒性肺炎）中發揮非常重要的作用。在這個階段，效率是顯而易見的。儘管這是一種困難的疾病，但它不是無法治癒的疾病，其效率和治愈率將是最好的。這對於抑制肺炎疾病的大規模蔓延以及對該疾病患者的醫學治療很重要。

當前已知的流感病毒是 A, B 和 C 型，其流行主要是 A 和 B。金剛烷胺和金剛乙胺僅對 A 型流感病毒具有抑製作用，並且具有相似的功效。早期治療輕度甲型流感可以減少發燒並縮短病程。這種藥物是一種方便的口服藥物，但是它容易產生耐藥性，並且還可能引起不良反應，例如頭暈和失眠。利巴韋林是一種廣譜抗病毒藥物，可在體內和體外抑制多種 DNA 和 RNA 病毒。它適用於呼吸道融合性支氣管炎，帶狀皰疹和小兒腺病毒性肺炎，也可用於治療流行性出血。發燒的首選藥物。中國學者在上呼吸道病毒感染的噴霧劑和滴鼻劑以及小兒腺病毒感染靜脈注射劑方面也取得了良好的效果。其氣霧劑和氣霧劑在國外用於治療流感和呼吸道合胞病毒性肺炎，效果確切。流感病毒神經氨酸酶可以促進新形成的流感病毒從感染細胞中釋放，並從呼吸道粘膜擴散到周圍組織。神經氨酸酶抑製劑扎那米韋是一種新型抗病毒藥物，可以有效抑制甲型和乙型流感病毒。它對許多神經氨酸酶依賴性病毒流行病具有相同的治療效果，並且具有多種選擇，具有性別高，毒性低，活性強，劑量小，作用範圍廣，預防效果好的優點。扎那米韋的口服生物利用度非常低，只能口服或經鼻給藥。Osetamivir (Tamiflu) 是神經氨酸酶的另一種有效抑製劑，是活性藥物 GS-4071 的前體，對流感病毒神經氨酸酶的抑制活性是 zanamivir 的 3 至 6 倍。美味的藥。Peramivir 是一種新型的抗流感神經氨酸酶抑製劑

人類的冠狀病毒種類比較多，分別屬於第 1 類和第 II 類。一些陸續被發現的冠狀病毒新種如水貂冠狀病毒、兔冠狀病毒等，抗病毒金剛胺和 Isathiazone 化合物能夠抑制 TGEV 在細胞培養中的增殖；人冠狀病毒 229E 株和 TGEV 的受體抑制劑為 Ubenimex(商品名為百士欣或烏苯美司)以及

奧司他韋

苯佐那酯等藥物也有參考使用價值。

犬冠狀病毒貓冠狀病毒豬肺炎病毒 羊肺炎病毒 牛肺炎病毒 馬肺炎病毒 土黴素、替米考星、氟苯尼考或泰拉菌素牛病毒性肺炎。馬鼻肺炎病毒（EHV1）可分為 2 個亞型，即亞型 1 又

叫胎兒亞型，主要導致流產；亞型 2 又叫呼吸系統型，主要導致呼吸道症狀。EHV1 能在雞胚成纖維細胞以及馬、牛、羊、豬、犬、貓、倉鼠、兔和猴等多種動物的原代細胞上增殖，此外不能在牛胎腎、綿羊胎腎和兔胎腎等多種傳代細胞內增殖

SV40 全名猿猴空泡病毒 40 (Simian vacuolating virus 40) 或猿猴病毒 40 (Simian virus 40)，是一種多瘤病毒，也是一種 DNA 病毒。

(Simian virus 40)，是一種多瘤病毒，也是一種 DNA 病毒

中東呼吸系統綜合徵冠狀病毒是導致中東呼吸系統綜合徵的病原體(英文縮寫:MERS-CoV 或代號: EMC/2012 'HCoV-EMC/2012')

肺是很多進行空氣呼吸的動物的呼吸系統中重要的一個器官哺乳動物和其他身體結構較為複雜的動物則擁有兩個肺，其位於胸腔中靠近脊柱，並分別位於心臟的左右兩側。

世界肺炎日(World Pneumonia Day)於 2009 年 11 月 2 日由全球近百個組織和機構組成的聯盟——全球消滅兒童肺炎聯盟(The Global Coalition against Child Pneumonia)發起。並確定與每年的 11 月 12 日是世界肺炎日，以督促政府加強對肺炎的預防和治療。世界衛生組織和聯合國兒童基金會發布了《肺炎預防和控制全球行動計劃》(The Global Action Plan for the Prevention and Control of Pneumonia (GAPP))肺炎，這種大多數人並不陌生的疾病，卻是全世界 5 歲以下兒童的頭號“殺手”，每年造成約 200 萬名 5 歲以下兒童死亡，平均每 15 秒鐘就會有一名兒童死於肺炎。(肺結核，肺癌等也是肺部疾病患者的殺手)。中老年死於肺病的人數每年也是百萬計數。

綜上所述，對於 Sars 和冠狀型新病毒性肺炎等的研究和治療預防，都是十分重要的，特別是對於傳染性冠狀型病毒肺炎的治療預防關係重大，事關人們的生命健康，意義重大。1. 傳染源 自然與動物有極大關係，但也不排除其他傳染途徑。2 醫學研究和防治除了人體的特殊基因細胞外，動物試驗研究也很重要，不排除人畜共患的因素。所以，對動物家畜的相關冠狀型病毒肺炎病毒要加大研究，獸醫學和醫學的緊密結合，包括實驗，病原病理藥物治療等。3.在現有的技術條件下，如何醫療救治是重中之重，救治生命，防止疫病擴散傳播蔓延，事關重大。大的瘟疫和傳染病的危害性後果不堪設想。抑製藥物醫療藥物免疫藥物滅病毒藥物尤為重要。4.隨著時代的發展，生命物種的繁衍和進化，自然界生物界也在發生變化。病菌病毒的進化及其變異也會發生，值得高度關注和人類警惕警覺。新型的病菌病毒會向人類襲來，不可低估。5.現代科學技術發展迅猛，生物工程，基因工程，細胞，酶，蛋白質，航天醫學，生物醫學機器人工程，藥物設計和研製，疫苗的研製，藥化學結構的篩選和修飾等等日顯重要，特別對於嚴重威脅人類生命的重大疾病，艾滋病，癌症，心髒病，肺病，傳染性疾病 (Sars, 冠狀型病毒肺炎等)，疑難病症等等更具有極其重大意義。6.冠狀型病毒肺炎的變異和生物標誌物，特效和高效防治技術，療效高的藥物和疫苗，都提出了重大研究課題。Sars 和冠狀型肺炎的研究防治，呼吸道傳染病的多次出現的原因和人類的預防對策，都需要我們高度關注。否則，人類還會遭遇病魔的侵襲，這些病毒會反復出現反復發作，或以新的變種新的變態出現。

First, the general treatment: to protect diarrhea, keep the airway open, prevent water, electrolytes and acid-base imbalance, if necessary, oxygen therapy. Antiviral drugs: Amantadine 0.1g, 2 times / d for 3 to 5 days; ribavirin, 10mg / kg, 2 or 3 times / d, orally or by injection; Banlangen, Astragalus, Honeysuckle, Daqingye, Forsythia, etc. have certain antiviral effects. Also available are alpha-interferon, thymosin, and the like. Third, the corresponding antibiotics should

be given for secondary bacterial infections.

Alpha-interferon inhalation (5 million U each time for adults, add 2ml of sterile water for injection twice daily);

Lopinavir / ritonavir 2 capsules each time, twice a day.

Antiviral drugs are a class of drugs used to specifically treat viral infections. (Viricide) is different, the former is used to suppress the virus in the body, while the latter is used to destroy the virus in vitro.

The mechanism of antiviral drugs is to protect against further infections of the virus by affecting certain links that interfere with the viral replication cycle. For example, directly inhibit or kill the virus, interfere with the adsorption of the virus, prevent the virus from penetrating into the cell, inhibit the virus biosynthesis, inhibit the virus release, or enhance the host's anti-virus capabilities, etc.

Most antiviral drugs are currently used against HIV, herpes virus, hepatitis B and C viruses, and influenza A and B viruses.

Antiviral drugs are divided into the following categories:

1. Penetration and Hulling Inhibitors: Amantadine, Amantadine, Enveviridi, Maravero
2. DNA polymerase inhibitors: acyclovir, ganciclovir, valacyclovir, famciclovir, sodium phosphonate
3. Reverse transcriptase inhibitor:
 1. Nucleosides: lamivudine, zidovudine, emtricitabine, tenofovir, adefovir dipivoxil
 2. Non-nucleosides: efavirenz, nevirapine
4. Protein inhibitor: saquinavir
5. Neuraminidase inhibitors: oseltamivir, zanamivir
6. Broad-spectrum antiviral drugs: ribavirin, interferon

These drugs have considerable curative effect or significant effect, which is worthy of recognition. New drug design and chemical structure modification, combined with biomedical engineering technology and genetic engineering, etc., new drugs will be developed gradually. Especially for the development of Sars, Coronavirus pneumonia and other drugs. Of course, botanicals or compound preparations will be developed gradually.

A. Traditional medicine

B. Chemical drugs Antiviral drugs, immunizing agents, antibacterial drugs, genetic drugs (combined drugs) for critically ill patients, etc.

C. Botanical drugs

D. Compound drugs

E. Immunizations, vaccines

F. Other physical therapy

G. Gene therapy

H. Medical sterilization detoxification chamber for respiratory infectious diseases Physical instrument therapy Respiratory therapy

I. surgery

J. Lung physical medical device

K. Some veterinary medicines (pneumonia drugs such as cattle, sheep, pigs, dogs, cats, etc., selective reduction and adaptation, strict selection without harm to the human body and toxic and side effects) These drugs can also refer to, including clinical research, new drug development .

L. Other.

M. Taking the above technologies and medical drugs will have a certain effect. For the firefighting of coronavirus, it will play a very important role in bacterial viral pneumonia (Sars, respiratory belt infectious diseases such as coronavirus pneumonia). At this stage, efficiency is obvious. Although it is a difficult disease, it is not an incurable disease, and the efficiency and cure rate will be the best. This is important for the suppression of large-scale spread of pneumonic disease and for medical treatment of patients with the disease.

Currently known influenza viruses are types A, B, and C, and the prevalence is mainly A and B. Amantadine and rimantadine only have inhibitory effects on influenza A virus and have similar efficacy. Early medication for mild influenza A can reduce fever and shorten the course of the disease. This type of drug is a convenient oral drug, but it is prone to drug resistance and can also cause adverse reactions such as dizziness and insomnia. Ribavirin is a broad-spectrum antiviral drug that inhibits a variety of DNA and RNA viruses in vivo and in vitro. It is suitable for respiratory fusion bronchitis, herpes zoster and pediatric adenoviral pneumonia, and is also used to treat epidemic bleeding. The drug of choice for fever. Chinese scholars have also achieved good results with their sprays and nasal drops for upper respiratory tract viral infections and intravenous injections for pediatric adenovirus infections. Its aerosol and aerosol administration is used abroad to treat influenza and respiratory syncytial virus pneumonia, and the effect is exact. Influenza virus neuraminidase can promote the release of newly formed influenza virus from infected cells and spread from the respiratory mucosa to surrounding tissues. Neuraminidase inhibitor zanamivir is a new type of antiviral drug that can effectively inhibit influenza A and B viruses. It has the same therapeutic effect on many neuraminidase-dependent viral epidemics and has options It has the advantages of high sex, low toxicity, strong activity, small dosage, wide range of action, and good prevention effect. Zanamivir has very low oral bioavailability and can only be administered orally or nasally. Osmimivir (Damifi), another potent inhibitor of neuraminidase, is a precursor of the active drug GS-4071, and has 3 to 6 times the inhibitory activity against neuraminidase of influenza virus than zanamivir. Delicious medicine. Primivir is a new type of anti-influenza neuraminidase inhibitor. Its activity is similar or stronger than that of zanamivir and osimivir. In vitro studies have shown that it has a very high selectivity for influenza virus. Good absorption, longer plasma half-life, can be used once a day.

Abidol tablets Lopinavir / Ritonavir tablets (Lopinavir / ritonavir, LPV / r, trade name: Cleeve

In the absence of the development of a new special drug, the use of the above-mentioned drugs and technical means is the best choice, and its effectiveness and high efficiency are worth affirming. It also takes time and process to be able to clinically treat drugs and vaccines. As long as we work hard, medical scientists and pharmacists must make breakthroughs and make significant progress in the time we can see.

Pneumonia diseases, including severe viral bacterial influenza pneumonia, are a major scourge of human survival, especially Sars viral pneumonia (coronary virus pneumonia, etc.) is extremely harmful to humans, and must not be underestimated. A large-scale plague will occur, with the majority of deaths, with extremely dire consequences. To this end, strict precautions must be taken and the right medicine can be prescribed. Infectious diseases such as influenza, pneumonia, and hepatitis are high in the winter and spring seasons, and it is especially critical for vulnerable groups to resist. It is crucial to strengthen protection for specific and ordinary people to prevent

the spread of large-scale infections. It is also critical to contain and prevent pathogens and sources of disease transmission. Coronavirus pneumonia is quite comparable to the pathogenesis and harm of various pneumonia in animals and livestock. Cattle, sheep, pigs, dogs, cats, birds, birds, etc. also have certain transmission of viral infections, and must not be taken lightly.

(Network Diagram) Chemical Structure Diagram-Medicinal Chemical Structure Modification
Quoted from Related Websites

BetaCoV / Wuhan / IVDC-HB-01 / 2019, BetaCoV / Wuhan IVDC-HB-04 / 2020, BetaCoV / Wuhan / IVDC-HB-05 / 2019, BetaCoV / Wuhan / WIV04 / 2019 and BetaCoV / Wuhan / IPBCAMS-WH-01/2019 [6] [14] [15]. Its RNA sequence is approximately 30,000 nucleotides in length (source Wikipedia)

Severe Acute Respiratory Syndrome (SARS) SARS Incident (2003) Middle East Respiratory Syndrome Coronavirus

(MERS) Middle East Respiratory Syndrome (2012) Variant A H1N1 Influenza (H1N1) 2009 H1N1 Influenza (2009) Ebola Virus Ebola Virus Outbreak in 2005 (2005)

—Les voies de transmission des coronavirus montrent que les animaux

Infections par voie respiratoire ou par la bouche et la conjonctive. Le virus est exhalé par

Ou de la toux, des aérosols, des sécrétions trachéales et des excréments, mais

Suspendu dans l'air ou répandu dans des outils de pollution, des enclos, de la nourriture, etc.

Il est nécessaire, par conséquent, dans la détection des anti-prototypes, l'immunisation avec la technologie des enzymes peroxydases est souvent utilisée.

Techniques, Techniques de microscopie électronique d'immunisation, Techniques de détection d'acide nucléique viral

Les coronavirus comprennent principalement les inhalateurs respiratoires humains et les coronavirus

(VHC), virus coronarien intestinal humain (HECV), virus de la bronchite infectieuse du poulet (IBV), virus de la gastro-entérite infectieuse du porc (TGEV), grippe porcine

Virus de la diarrhée pédiatrique (VDEP), virus de la myélite cérébrospinale hémagglutinante porcine

(HEV), Virus de l'hépatite de la souris (MHV), Flaming Chicken Blue Crown Disease Virus

(TCDV), Coronavirus de la diarrhée du veau nouveau-né (NCDCV), Estomac poulain

Virus de l'entérite coronaire (FGEV), Virus coronaire canin (CCV), Transmission du chat

Virus de la péritonite sexuelle (FIPV), virus coronaire du rat (RCV, voies respiratoires

Et pneumonie), virus de l'inflammation des glandes salivaires du rat (SDAV) virus de la maladie coronarienne du vison (ECV), virus de la maladie coronarienne du lapin

Autres animaux (y compris divers animaux de la colonne vertébrale aquatique

Et les animaux vertébrés terrestres) ont également découvert successivement des maladies causées par des virus coronaires,

Comprenant principalement le virus de Berne, le virus Breda

(Bredavirus) et les rhumatismes humains.

Propriétés essentielles de la maladie coronarienne

Coronavirus pour coronavirus de poulet, porc, chien, chat, humain et souris

L'observation d'échantillons colorés négativement a montré que le coronavirus était polymorphe.

Virus coronaire sur l'alcool, l'éther, le chloroforme, les sels biliaires et autres solvants lipidiques

Sensible; très sensible à la température, donc l'épidémie provoquée par celle-ci est plus fréquente

En hiver et au début du printemps. Sensibilité à l'acide, divers coronavirus ne

Ils sont tous identiques et généralement sensibles à pH3 ou inférieur.

Prolifération sur cellules péritonéales et cellules CRFK de chatons primaires; TGEV et

Le VHE peut s'adapter aux cellules rénales primaires de porc, aux cellules de la rate, aux cellules thyroïdiennes et aux testicules

Cellules pilules, etc.; le PEDV peut s'adapter aux cellules intestinales du porc fœtal; le NCDCV peut s'adapter

Cellules rénales de singe de la rivière Yingheng, cellules rénales bovines fœtales; le MHV peut s'adapter aux souris

Macrophages, cellules DBT de souris, cellules 17CL-1 de souris; le VHC convient à la succession de cellules rénales embryonnaires humaines, de cellules wl-38,

Macrophages, cellules DBT de souris, cellules 17CL-1 de souris; le VHC est applicable aux cellules rénales embryonnaires humaines, aux cellules w-38, aux cellules Hela et ainsi de suite.

Il existe de nombreux types de coronavirus chez l'homme.

Ils appartiennent respectivement aux classes 1 et II. Une maladie coronarienne a été trouvée

Nouvelles espèces vénéneuses telles que le coronavirus de vison, le coronavirus de lapin, etc.

Amantadine antivirale associée à l'isathiazone

Les matériaux peuvent inhiber la prolifération du TGEV dans la culture cellulaire; maladie coronarienne humaine

Ubenimex (inhibiteur commercial de la souche 229E et du TGEV)

(Le nom du produit est Bestox ou Ubenimex)) et

Oseltamivir

Les médicaments tels que le benzonatate ont également une valeur de référence.

Coronavirus canin coronavirus félin virus de la pneumonie porcine virus de la pneumonie ovine virus de la pneumonie bovine virus de la pneumonie équine oxytétracycline, telmicosine, flufénicol ou tylosine pneumonie virale bovine Le virus de la pneumonie rhinocéros équine (EHV1) peut être divisé en deux sous-types, à savoir le sous-type 1 est également appelé sous-type fœtal, ce qui provoque principalement l'avortement; le sous-type 2 est également appelé type du système respiratoire, ce qui provoque principalement des symptômes respiratoires. L'EHV1 peut proliférer sur les fibroblastes d'embryons de poulet et les cellules primaires de chevaux, de bovins, de moutons, de porcs, de chiens, de chats, de hamsters, de lapins et de singes. De plus, l'EHV1 ne peut pas être utilisé chez les fœtus de bovins, ovins et lapins. Prolifération intracellulaire

Le nom complet de SV40 est Simian vacuolating virus 40 (Simian viruslating virus 40) ou Simian virus 40 (Simian virus 40), qui est un virus polyome et un virus à ADN.

(Virus Simian 40), un virus du polyome et un virus à ADN

Le syndrome respiratoire du Moyen-Orient Le coronavirus est l'agent pathogène qui cause le syndrome respiratoire du Moyen-Orient (abréviation anglaise: MERS-CoV ou nom de code: EMC /

2012' HCoV-EMC / 2012 »

Le poumon est un organe important dans le système respiratoire de nombreux animaux qui respirent de l'air. Les mammifères et les autres animaux aux structures plus complexes ont deux poumons, qui sont situés dans la cavité thoracique près de la colonne vertébrale et sur les côtés gauche et droit du cœur.

La Journée mondiale de la pneumonie a été lancée le 2 novembre 2009 par la Coalition mondiale contre la pneumonie infantile, une coalition de près d'une centaine d'organisations et d'institutions à travers le monde. Et il est déterminé que le 12 novembre de chaque année est la Journée mondiale de la pneumonie pour exhorter le gouvernement à renforcer la prévention et le traitement de la pneumonie. L'Organisation mondiale de la santé et l'UNICEF ont publié le Plan d'action mondial pour la prévention et le contrôle de la pneumonie (GAPP), une maladie qui n'est pas inconnue de la plupart des gens. Le tueur numéro un mondial d'enfants de moins de 5 ans tue environ 2 millions d'enfants de moins de 5 ans chaque année, et en moyenne un enfant meurt d'une pneumonie toutes les 15 secondes (la tuberculose pulmonaire, le cancer du poumon, etc. sont également des tueurs de patients atteints de maladies pulmonaires). Le nombre de personnes d'âge moyen et de personnes âgées qui meurent d'une maladie pulmonaire représente également des millions de comptes chaque année.

References Citing data charts, etc .: Internet resources, Wikipedia, Chinese encyclopedia and related websites.